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A WEEKLY EPITOME
OF
CURRENT MEDICAL LITERATURE.

MEDICINE.

(194) Mitral Constriction and Hysteria in Men.

GIRAUDEAU (*Archives Générales de Médecine*, November, 1890) gives an account of four young men who suffered from mitral constriction and were the subjects of hysteria. None of them had previously had rheumatic fever, but one had had pericarditis at the age of 17 years. One in infancy had had whooping-cough, and another had had mumps. The author is inclined to think that the mitral disease was congenital; anyhow it had existed many years. He considers the association of mitral constriction and hysteria too frequent to be accidental. The first patient had typical hysterical convulsions, accompanied by hemianæsthesia. The second one had frequent similar attacks, and his heart was very rapid. The chief hysterical symptom in the third case was hemianæsthesia in a zone around the arm. This patient suffered much from epistaxis; and the fourth, who had had pericarditis, also complained of hemianæsthesia. Giraudeau refers to other cases of which he has heard, and he has met with more cases of this association in men than in women; but this is probably quite accidental in his experience.

(195) The Diagnosi of Pulmonary Cavitie

PROFESSOR RUMPF, of Marburg, in the course of an address to a local medical society (*Berliner klinische Wochenschrift*, No. 44, 1890), discusses the diagnostic value of the change in the pitch of the percussion note over a pulmonary cavity when the mouth is closed or open, commonly known in Germany as Wintrich's sign. He points out that this, like so many other signs of cavitation in the lung, is not always present in the same case. Its occasional absence is explained by the probable obstruction of the bronchus leading directly into the cavity. This obstruction may sometimes be overcome by altering the position of the patient during percussion as suggested by Gerhardt and others, but even this plan is not always successful. By making careful comparison of the percussion note obtained over a cavity on deep inspiration with the mouth and nose open, and then, with these apertures closed, Dr. Rumpf succeeded in eliciting the characteristic change of pitch in four cases in which Wintrich's sign under ordinary respiratory conditions was only occasionally present. The accuracy of the diagnosis was in each case proved by *post-mortem* examination.

(196) Death from Suffocation.

DR. S. COULL MACKENZIE (*Indian Medical Gazette*, September, 1890) analyses thirteen instances of sudden death from suffocation which have come under his notice as police surgeon at Calcutta during the last few years. The persons died from accidents in which mechanical force or obstruction was the cause of death, such as pressure on the thorax and face by fallen mud walls and loose earth respectively falling over labourers, people being crushed in crowds, foreign bodies entering the air passages and preventing the entrance of atmospheric air into the lungs, and by pressure on the chest, as in the case of a mother rolling over her infant in sleep. Of this latter cause it is satisfactory to note there was only one instance. Asphyxia was found to be the mode of death in all the cases. Tardieu's spots were absent in all the persons. The lungs in all the cases were congested, and in nine the bronchi and air cells were empty. The ecchymoses described by Tardieu were not detected on the lungs, pleuræ, pericardium, or heart of a single person. In eleven instances there was fluid blood in the cavities of the heart, in two on both sides, in the remaining nine on the right side only. In eleven instances the blood was noted to be fluid, in ten of them being dark. The abdominal viscera were congested in a considerable majority of the cases.

SURGERY.

(197) Cholecystotomy and Cholecystectomy.

DR. ROUX (*Revue Médicale de la Suisse Romande*, October 10th, 1890) gives an account of three cases: one of cholecystectomy and two of cholecystotomy, all of which recovered. In the two cases of cholecystotomy the gall bladder was opened and the stones removed, after which its walls were sutured and it was replaced within the abdomen. He calls this "ideal cholecystotomy," in contradistinction to natural cholecystotomy, in which the gall bladder is sutured to the abdominal wall. In the first case the patient was a woman aged 32 years, who, in 1885, had had peritonitis after a bad confinement. In 1886 she entered a hospital suffering from congestion of the ovaries, for which Professor Müller removed these organs in February, 1887. In August, 1889, she came under the care of Dr. Roux for a painful tumour in the right side, which was diagnosed as being a floating kidney; and the operation of nephrorrhaphy was performed. She afterwards had attacks of pain and vomiting, together with slight jaundice, and another tumour was felt in the right hypochondrium. Laparotomy was performed by a median incision above the umbilicus, and a distended gall bladder found, the distension being caused by a large calculus in the cystic duct. The cyst was full of clear fluid, like glycerine, and contained other stones. As the large stone in the duct could not be dislodged, the gall bladder and greater

part of the cystic duct were removed. There was some bleeding from the liver substance, which was easily controlled with the actual cautery. The cystic duct was found obliterated beyond the stone. The abdomen was closed in the usual way, and the patient made a rapid recovery. The second case was that of a woman, aged 52, who had a dilated stomach, together with severe attacks of pain, and in whose abdomen a small tumour could be felt in the neighbourhood of the gall bladder. An exploratory incision into the abdomen in the middle line above the umbilicus showed that this was a distended gall bladder surrounded by many adhesions, some of which had compressed the pylorus. The gall bladder contained a large calculus and was also full of bile, which could be emptied out by squeezing. The cyst was drawn into the wound and incised and the calculus extracted. The walls were then repaired by first suturing the mucous membrane, next the sero-muscular coats, and lastly the serous coat. The patient made a good recovery. The third and last case was that of a woman, aged 45 years, who suffered from very severe abdominal pain, but had never had jaundice. She had an irregular tumour in the right hypochondriac region, which was firm to the touch and irregular in shape. This was exposed by an incision in the right linea semilunaris, and proved to be the gall bladder full of bile and containing a number of calculi. The gall bladder was incised, as in the previous case, and its contents evacuated; after which its walls were sutured in the same manner as before, and it was replaced within the abdomen, which was closed. The patient made a rapid recovery. In his remarks upon these operations Dr. Roux mentions the loss of weight which, for a few months, supervenes upon removal of the gall bladder. He attributes it to the constant presence of bile in the intestines. It is also maintained that ideal cholecystotomy is much less dangerous than other surgeons have thought.

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(198) Gunshot Wounds of the Stomach and Intestines.

Dr. Senn (*Journal of the American Medical Association*, September 13th) discusses the operative treatment of gunshot wounds of the stomach and intestines. In gunshot wounds of the abdomen, in the absence of external fæcal extravasation and prolapse of the omentum, it is absolutely necessary to establish the fact that penetration has or has not taken place by enlarging the wound down to the peritoneum if the bullet has entered the peritoneal cavity, or in non-penetrating wounds, sufficiently far to show conclusively that the peritoneal cavity has not been invaded. In a fair percentage of cases, more particularly in cases in which the wound of entrance is at or above the level of the umbilicus, and if the course of the bullet has been in an antero-posterior direction, laparotomy is not needed, and recovery may take place without surgical interference. On the other hand, in transverse and oblique gunshot wounds of the abdomen below the level of the umbilicus, multiple perforation of the intestines may be confidently expected. The only symptom of value in the differential diagnosis of abdominal wound with or without penetration of the intestine is external fæcal extravasation. Dangerous internal hæmorrhage furnishes a positive and urgent indication for treatment by laparotomy. Dr. Senn strongly advocates the insufflation of hydrogen gas in all cases of suspected wound of the stomach or intestine. Such wound, if large enough to permit the escape of the contents of the wounded organ, can, it is asserted, be infallibly demonstrated by this test. Direct insufflation of the stomach is preferred when this organ is supposed to be the seat of injury, whilst the existence and probable situation of gunshot wounds of the intestines can be best ascertained by rectal insufflation. Thorough insufflation without evidence of free tympanites or escape of gas through the external wound demonstrates either the absence of perforations, or that if present they are too small for leakage to take place. The result of the test in such cases is therefore a strong argument in favour of non-interference. In laparotomy for gunshot wound of the abdomen the external incision should never be closed until the whole length of the gastro-intestinal canal has been subjected to the hydrogen gas test, in order to guard against the possibility of leaving a perforation undiscovered. Hydrogen gas, it is held, is the most suitable agent for diagnostic insufflation of the gastro-intestinal canal, as it is non-irritating, non-toxic, and possesses valuable inhibitory antiseptic properties. Laparotomy in the treatment of gunshot wound of the abdomen when indicated by the escape of the gastric or intestinal contents, should be performed as soon as possible after the infliction of the injury, and always before septic peritonitis has had time to develop. A small bullet wound of the stomach or intestine may be best closed by the application of a single row of interrupted sero-muscular sutures of fine aseptic silk. If enterectomy be rendered necessary, Dr. Senn would recommend, in preference to circular enterorrhaphy, an anastomosis between the closed ends of the divided intestine by lateral apposition with decalcified bone plates. In conclusion, Dr. Senn urges that the adoption of adequate provisions for the prompt operative treatment of perforating gunshot wounds of the abdomen, in hospital tents in the rear of the line of battle, should receive the most serious consideration of military authorities and of surgeons to whom will be committed the charge of the wounded in any future campaign.

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(199) Flat-Foot.

Mr. A. Miller brings forward (*Edin. Med. Journal*, September, 1890) arguments in support of the view that flat-foot is due to strain on the calcaneo-scaphoid ligament. In this form of distorted foot, pain, it was pointed out, is felt in three situations: (*a*) on the inner and inferior aspect of the foot; (*b*) across the dorsum; and (*c*) on the outer side. In the first of these situations the pain is excited by pressure applied just behind and below the tubercle of the scaphoid, which is the position of the inferior calcaneo-scaphoid ligament. The pain in the second situation is due evidently to the pressure of the astragalus against the scaphoid after the normal relation of these bones has become somewhat altered. In the third situation the pain is certainly caused by pressure of the external malleolus on the os calcis. Those who suffer from flat-foot are they who have to stand much or to carry burdens, and in those who have a tendency to flattening of one foot only it is the foot on which they habitually stand that is affected. If this view be correct, it would be necessary in the treatment of flat-foot to take off the strain on the calcanec-scaphoid ligament. As the subjects of the affection are seldom in a position to "lie up," it is necessary, Mr. Miller holds, that they be instructed in some method of standing and walking that will relieve the strain on the inner side of the foot. This may be easily done by making the sole of the patient's boot thicker on the inner than on the outer side, and in this way throwing the weight of the body more on the outer side of the foot. The second point in the treatment of flat-foot is support for the calcaneo-scaphoid ligament. Mr. Miller holds that if the posterior muscles of the leg be strength-

ened by gymnastic exercises the ligament will be relieved, more especially in walking. It is evident, he points out, that the ligaments of the foot are very dependent on the muscles of the leg, and that when the latter are deficient in their duty extra strain is put on the former. Whilst it is allowed that mechanical support, such as a spring or pad in the boot, may in some cases prove useful, it is pointed out that in many instances pressure on the under surface of the arch of the foot only increases the patient's discomfort. Mr. Miller has full confidence in his plan of treatment, and has not yet found it necessary to perform any cutting operation for the cure of flat-foot.

(200) Treatment of Tuberculous Disease of the Foot.

In a recently published pamphlet (*Les Tuberculoses du Pied*, Paris, 1890) Dr. C. Audry, of Lyons, deals with the clinical characters and the treatment and prognosis of the different forms of tuberculous disease of the bones of the foot, and, basing his conclusions on the results of Professor Ollier's practice during the past thirty years, discusses the relative value of simple scraping operations, of excision, and of amputation. In his remarks on the choice of operation in those cases in which it is necessary to sacrifice the whole of the foot, the author points out that the surgeon should try to diminish, as far as possible, the number of amputations in the leg, for, however good may be the result, it is never to be compared with that of subperiosteal disarticulation of the foot. The existence of long sinuous canals, lined by fungous granulations and secreting pus, traversing the tendinous sheaths and the muscular interspaces, constitutes but a relative contraindication, for if all the other conditions are good, as long as careful attention is paid to drainage, Syme's operation, or the modified form advocated by Ollier, may be practised with good prospect of success. It is very exceptional for the skin of the heel to be hopelessly damaged by disease; in most instances the surgeon is enabled, by means of the curette and the cautery, to cleanse the fistulous tracts and to utilise them for the insertion of drainage tubes. Invasion of the lower part of the shaft of either of the leg bones by tuberculous disease is not always a contraindication of disarticulation, as the heel flap may prove useful even when the section of the tibia and fibula is made at a distance of three inches and a half above the malleoli. As a rule the contra-indications to the more conservative operation are influenced much less by the local condition than by the age and general condition of the patient. The after-treatment of the stump formed by the heel flap, particularly where this contains the periosteum of the os calcis, is usually more prolonged than that required for amputation of the leg, and demands more direct and active attention. In cases, therefore, of advanced and extensive disease of the bones of the foot, in which it is necessary to operate for the relief of pain and to save the patient from the exhausting effects of profuse suppuration, the surgeon should have recourse to amputation through the leg, as this operation favours most rapid and ready cicatrisation, and so frees the patient at once from a threatening centre of septicæmia. Advanced or middle age is also a contraindication of disarticulation; if the patient be above 40 the surgeon cannot expect any good results from attempts to preserve the periosteum of the os calcis, and should avoid any procedure likely to necessitate a prolonged after-treatment. Dr. Audry would then reserve the operations of subperiosteal disarticulation of the foot and of low amputation of the leg with a flap from the heel for cases in which the patients are young, relatively vigorous, and free from infective phenomena and advanced tuberculous disease in other parts of the body.

(201) Ligature of the Vertebral Artery in Epilepsy.

Dr. Telford Smith (*Journal of Mental Science*, October, 1890) relates the following case: An imbecile boy, aged 11, had from twenty to thirty epileptic fits a month. The imbecility and epilepsy were both congenital. The left vertebral artery was tied in 1881. For four years after the ligature there was marked mental improvement after careful training, and there were no epileptic fits. They gradually returned, however, and the mental condition relapsed. In 1885 he had 49 fits; in 1888, 231 fits; in 1889, 245 fits; and the mental state was at the time of the report slowly deteriorating.

(202) Rupture of the Rectum by Petersen's Colpeurynter.

Dr. G. Ryerson Fowler (*Annals of Surgery*, August, 1890, vol. xii, No. 2, p. 129) records a case of rupture of the rectum by Petersen's colpeurynter, during an attempt to perform intraperitoneal cystotomy. He attributes the accident to degenerative changes in the rectal wall. Only eight ounces of fluid were used with the bag. One or two other cases of the kind are referred to, and the conditions under which the use of the bag is contraindicated are alluded to.

MIDWIFERY AND DISEASES OF WOMEN.

(203) Fatal Pulmonary Hæmorrhage during Menstruation.

Professor Max Flesch, of Frankfort (*Centralblatt f. Gynäk.*, No. 37, 1890) wrote four years ago (*ibid.*, No. 19, 1886) upon cases of fatal hæmorrhage from organs other than the female genitals during menstruation. Since then he has seen more instances of the same morbid phenomenon; one case was very closely observed. A fat sickly subject, aged 28, evidently suffering from fatty degeneration of the heart, was seized with an attack of bronchitis during the sixth month of pregnancy. The pulmonary complication proved obstinate, yet the patient was safely delivered at term, and recovered rapidly from her confinement. Two months later, the patient living in an unhealthy residence in cold weather, the bronchitis grew worse and assumed the putrid type. As slight œdema set in, Dr. Flesch made the patient wean her child. Fever and dyspnœa followed a few days after weaning. Circumscribed dulness, apparently extension of the heart dulness, was detected to the right. The patient improved after appropriate treatment. Suddenly, ten days after the attack of feverishness, blood was found in the sputa, then fatal hæmoptysis set in. The lungs were carefully examined, and no trace of rupture of a large vessel could be detected. The bronchi were filled with frothy blood, which, in the author's opinion, must have proceeded from the smaller bronchial tubes. The endometrium was hyperæmic, the mucus in the uterine cavity bloodstained. A recently ruptured follicle was found in one ovary. These appearances seemed to indicate that menstruation set in on the day of death, and set up vasomotor disturbances in the circulation, which ended in free capillary hæmorrhage in the diseased bronchi.

(204) Ischiatic Hernia of the Ovary.

M. Routier (*Annales de Gynéc.*, September, 1890) read, before the Paris Société de Chirurgie, an account of this rare and remarkable condition. The

patient, a woman aged 40, under the care of M. Chénieux, of Limoges, had a tumour in the gluteal region. Diagnosis between lipoma and hernia was uncertain, so an exploratory incision was made. A cystic ovary, with the corresponding Fallopian tube, was discovered. The patient recovered in seventeen days. (Presumably the ovary was removed, but this is not stated in the report.) M. Routier noted that cases of this kind are very rare; two were recorded by Deveux, in a thesis published in 1813; two more by Velpeau. (Ischiatic hernia, it may be remembered, according to Mr. Birkett's classification and description, escapes through the great ischiatic notch, and forms a tumour beneath the gluteus maximus. The neck of the sac is either above or below the pyriformis muscle, but generally below. The fundus of the sac, at first covered by the gluteus maximus, escapes below the edge of that muscle as it extends further out of the pelvis and lies under the integuments. Rarities must not be disregarded, especially in respect to so serious a condition as hernia, and every surgeon and practitioner should remember that a swelling in the buttock may be hernial.)

(205) Elevation of the Pelvis in Abdominal Section.

Dr. G. Leopold (*Centralblatt für Gynäk.*, No. 42, 1890) has performed all his abdominal sections since March with the patients' hips elevated. The patient is placed horizontally on the operating table, with her hips and legs over a flap. When she has been brought under the influence of the anæsthetic the flap is raised, and is kept at the desired angle by the same contrivance as in an ordinary bedrest. The intestines then fall anatomically upwards towards the diaphragm, the pelvis becoming free of them. No troublesome prolapse of the gut through the abdominal wound during imperfect narcosis can occur. A large flat sponge is placed over the intestines to guard them, and thus eventration of some coils of gut in order to explore puzzling conditions in the pelvis becomes needless. The pelvic organs can be seen with ease; the promontory of the sacrum comes into view. The sewing up of a large peritoneal wound after removal of a uterine fibroid can be managed with comparative ease. The bystanders can see all the area of operation. As the operator can get so deep a view of the pelvis, there is no fear of clots or pools of pus and sanies being left behind. The ureters and other structures passing over the brim of the pelvis can be seen; this is often impossible when the patient lies flat on her back. The operator, assistant, and chloroformist stand as in cases where abdominal section is performed in England. The flap is lowered when the superficial sutures are applied to the abdominal wound. The elevation of the pelvis did not prove prejudicial to any patients. Dr. Leopold finds so many advantages in this position that he always operates in severe cases after the new fashion, which was originally recommended by Trendelenburg. The patient's right thigh is "a comfortable support" for the operator when necessary. Sixty-four cases have been operated upon with elevation of the pelvis, namely: ovariotomy, 21 cases; castration, 6; extraperitoneal myomotomy, 5; supravaginal extirpation of the uterus, 8; Cæsarean section, 6; extrauterine pregnancy, 8; and 10 other operations.

(206) Hydrostatic Treatment of Chronic Inversion of the Uterus.

Dr. Neugebauer, sen., of Warsaw, described a case where this treatment was successfully carried out at the International Medical Congress at Berlin. His paper is published in the *Annales de Gynécologie* for October. A woman, aged 22, had been subject for two years to an unreduced inversion of the uterus following labour. She suffered greatly from losses of blood. The upper two-thirds of the vagina were filled with an oval somewhat flattened body with its long axis longitudinal. It was slightly elastic and movable; its larger end was lowest, and it seemed to be pedunculated. Around the pedicle was a deep groove. The surface of the tumour was smooth and invested with a mucous membrane of a bright red colour. On bimanual palpation, an infundibuliform depression was detected between the broad ligaments; this confirmed the diagnosis of inversion of the uterus. The vagina was carefully washed out; then an india-rubber dilating bag was introduced into the passage and gradually filled with water, the amount being raised from 9 to 15 ounces. Every day the bag was withdrawn and the vagina thoroughly cleaned. For three days, on account of the menstrual period, it was discontinued; then it was reapplied for a fortnight; at the end of that space of time reduction was complete. No trace of the original abnormal condition remained.

(207) Tetanus after Spontaneous Abortion.

Dr. Alexandre (*Journal de Médecine de Paris*, September 21st, 1890) was called in on March 27th to a lady, aged 26. Ten days previously she had aborted midway between the second and third month, and much to her disappointment, as she had lost her two children and was desirous of having another. All went well till she got up, the day before Dr. Alexandre was sent for. Next day she was seized with dyspnœa. The author found the uterus and vagina healthy, the temperature normal; he thought that the dyspnœa must be neurotic, and gave an opiate. He was rung up in the small hours next morning, and found the patient with incipient trismus, the teeth being pressed together when she spoke. Later in the day the trismus became severe; tetanic spasms of the muscles of the neck set in. In the evening the facial muscles were contorted, and the biceps flexor cubiti was seized with tetanic spasm when the arm was moved. Chloral enemata, vapour baths, doses of bromides, and spoonfuls of milk as diet, were prescribed. The symptoms were thus palliated for two days. On March 30th she was much exhausted; occasional attacks of opisthotonos occurred. At length coma set in for eight hours, only interrupted by occasional convulsive fits, and terminated by death. Puerperal tetanus is rare, and usually follows induced abortion. The circumstances in this case precluded any suspicion of criminality. No cases of tetanus had occurred in the neighbourhood of the patient, who had been carefully treated. Carbolised vaginal injections had been administered several times a day from after delivery till the access of the tetanic symptoms.

PHARMACOLOGY AND THERAPEUTICS.

(208) The Formation of Peptone in the Human Stomach.

C. A. Ewald and G. Gumlich (*Berliner klin. Wochenschrift*, 1890, No, 44, page 1016) discuss in detail the value of peptone preparations in the treatment of disease, and describe some experiments they have performed regarding the effect of a German preparation named *Kraftbier* on nitrogenous equilibrium. The object of giving true peptone is to remedy the defective digestion of a weakened or diseased stomach,

True peptone—the end product of peptic digestion—has a very bitter taste like bile, and in spite of this being covered by sugar, chocolate, and other flavouring agents, a peptone preparation is almost constantly refused by a patient after a time. As Kühne and others have shown, most commercial "peptones" (such as Kemmerich's) contain only albumoses, true peptone being described as a proteid body soluble in hot and cold water, and not precipitated by saturation with ammonium sulphate or with sodium chloride and acetic acid. Albumoses, while closely resembling peptone, have not its bitter taste; and as Munk, Politzer, and others have shown, they can to some extent replace the ordinary proteids of the diet, that is, they are a proteid food. One of the authors' experiments goes to show that but little peptone is formed in the stomach in normal digestion, and this agrees with the fact that in artificial digestion peptones are only formed after a long time. Neumeister has shown that in the early stages of gastric digestion the proteids are probably absorbed either as syntonin or albumoses. Other facts go to show that peptones are only scantily formed in the stomach. The administration of albumoses in disease is complicated by the fact that patients soon get tired of one preparation, and, as in health, they like variety. The authors administered albumoses in the form of beer (*Kraftbier*)—a dark slightly frothy liquid with a slightly bitter after-taste. The analysis shows that it contains 9.53 grammes of proteid in 250 cubic centimètres, that is, over one-third of an ounce in 8 ounces. The beer was given to patients and to convalescents, both in hospital and private practice, sometimes for weeks, and in two cases during the whole summer. It was well borne, and produced no diarrhœa. In some patients it increased the appetite, and in two cases—one of gallstones and the other of cancer of the intestine—it was taken well and when other peptone preparations could not be borne. Researches on nitrogenous metabolism were conducted on two patients. All precautions were taken, the amount of nitrogen in the diet which maintained nitrogenous equilibrium was ascertained, and the increase of nitrogenous metabolism or the storing of nitrogen was estimated after the addition of the albumose preparation to the diet. For the details of these experiments the original paper must be consulted. One of the patients was a young woman suffering from melancholia and loss of appetite, the other was a man over middle age who had suffered from malaria and was anæmic, had an enlarged spleen, loss of appetite, and attacks of bleeding from the stomach and intestines. There was no sign of disease of the liver or malignant disease, nor was there leukæmia. In both patients the addition of *Kraftbier* to the diet increased the nitrogenous metabolism, and caused a storing up of nitrogen and increase of the body weight. Some of the results obtained are of great physiological interest. From many experiments of previous observers it may be concluded that the amount of proteid which will maintain the nitrogenous equilibrium is not so directly proportional to the size or weight of the body as Voit supposed. The condition of nutrition of the individual must be taken into account. The daily need of the body may be expressed in heat units or calorics, and Klemperer found, in a young and powerful man, that 77.7 calorics pro kilogramme of body weight were necessary to maintain nutrition, while Rubner and Forster have shown that with weakly "run down" individuals 35 to 45 calorics are necessary. The authors' researches bear out these results, for in one of the patients when nutrition was bad 22.6 calorics maintained nutrition; but while the patient was gaining weight and improved 25.7 calorics were necessary.

(209) Severe Effects of Intratympanic Injection of Cocaine.

Dr. G. Ficano, of Palermo, relates (*Gazzetta degli Ospitali*, October 26th, 1890) a case in which very disagreeable effects were produced by the injection of a few drops of cocaine into the tympanic cavity. The patient, a robust woman, aged 45, had been suffering for some time from chronic dry otitis media, with some impairment of hearing and constant noises in the ears. The Politzer method having failed, injections of from three to four drops of a 5 per cent. solution of hydrochlorate of cocaine were given through the Eustachian tube. After about a month of this treatment the hearing improved and the noises ceased, but they gradually returned when the injections were discontinued. They were therefore repeated from time to time till one day, five or six minutes after an injection of the usual quantity performed in the ordinary way, the patient began to tremble, became giddy, and finally was seized with severe vomiting. In the horizontal position the symptoms were less severe, but on sitting up they at once returned. She was kept lying perfectly still on a couch for four hours, and, the sickness having by that time almost passed off, she was then sent home in a carriage and put to bed, where she remained till next morning, when she awoke quite well. The symptoms throughout were identical with sea sickness, from which the patient had several times suffered. Dr. Ficano suggests that in similar cases the patient should be kept in the horizontal position, and that air should be injected from time to time into the tympanic cavity by Politzer's method. He thinks the symptoms were due, not so much to direct poisoning by the cocaine, as to the mechanical effects of the injection itself; he compares them to the giddiness, etc., often produced by syringing. He thinks they are to be accounted for by the depleting effect of the cocaine on the mucous membrane lining the tympanic cavity, whereby the tension in the labyrinth was modified.

(210) Treatment of Furunculosis.

Dr. Veiel, at the annual meeting of German physicians, held at Bremen, (*Monatsh. f. prakt. Derm.*, vol. xi, No. 8, 1890), stated that he had used in the treatment of furuncolosis a paste consisting of equal parts of oxide of zinc and vaseline, to which was added 4 per cent. boric acid. This ointment was thickly spread on lint. In cases of circumscribed furunculosis the paste was rubbed in and around the diseased parts three times daily. If the affection were universal, the whole body was rubbed with the application. Sublimate baths were at the same time used when the patient could bear them. In a case of universal furunculosis a perfect cure was obtained in seven weeks. All large boils were poulticed.

PATHOLOGY.

(211) Anæmic, Hyperæmic, and Neurotic Inflammation.

According to Samuel (*Virchow's Archiv*, vol. cxxi. Part 3), there are two chief types of the inflammatory process, the one characterised by anæmia of the arteries in the inflamed area, the other by hyperæmia. These two types he has, in previous papers, described and differentiated, and now he adds some interesting observations upon the influence of different nerves and the part they play in regulating the processes in each. These experiments were conducted on the rabbit's ear, and the injury resorted to for inducing inflammation was steeping the ear in water at a temperature of 54° C. for three minutes. The nerves divided were the sympathetic in the neck and the great and small auricular nerves, the former

containing the greater number of vasomotor fibres from the ear, and the latter consisting in the main of sensory fibres, having only a few vasomotor fibres from the tip of the ear. (1) In the anæmic type, which may be induced by mechanically interfering with the flow of arterial blood into the part, there is absence of dilatation and congestion of the large arterial branches, of œdema, of swelling and heat. The veins, on the other hand, are greatly distended with dark, almost violet-coloured, blood, which may come to a standstill and coagulate *in situ* (stasis), and the part becomes colder than natural. After many hours or even days a slight reactionary hyperæmic inflammation occurs and the ear gradually assumes its normal appearance. This type is also well seen in the ear opposite to that whose sympathetic nerve has been divided in the neck. (2) In the hyperæmic type the conditions are just the reverse, as is seen in a healthy tissue and also in the ear whose sympathetic nerve (vasomotor fibres) is divided. (3) In the case of division of both great and small auricular nerves the upper two-thirds of the ear become anæsthetic. In this, however, the same injury under the same external conditions produces a marked anæmic inflammation, in which no, or at most but slight, reactionary inflammation supervenes, stasis occurs in the veins, and partial or complete death of the injured and inflamed area results. This may, in part at least, help to explain the difference in the types of inflammatory processes, in the skin especially, which are now included under the term neurotic or trophic, to show the part played by vasomotor and sensory nerves in them.

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(212) Effect of Destruction of Different Parts of the Brain on the Development of the Cerebral Functions.

BECHTEREW (*Neurologisches Centralblatt*, November, 1890) has destroyed parts of the brain in newborn cats, rabbits, and rats, and finds that the paralyses and losses of sensation which can be produced by destruction of the cerebral cortex in adult animals cannot be induced by such operations upon these newborn animals, nor does destruction of the cerebellum in the latter lead to the various deviations of movement so common after such operations on fully grown animals. These results only refer to the immediate effects of the operations; functions which ought to develop later are unimpaired. Also, if the animals, such as guineapigs, are born into the world fully developed, operations on the brain will produce results as in adult animals. Nor are the above results of operations on newly born ill-developed animals true for all parts of the brain, for example, destruction of the restiform body and the central lobe of the cerebellum produce the same results in the young poorly developed animal as in the adult. Whether or not effects are produced depends upon the degree of development of the fibres of the part operated upon; if they are but poorly developed no effects are produced by their destruction.

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(213) Paget's Disease.

DR. A. B. MACALLUM (*Canadian Practitioner*, October 16th, 1890) has a note on the diagnosis of Paget's disease of the nipple and breast by means of the microscope. After referring to the peculiar bodies (psorospermiæ) which Darier and Wickham have found and described in the epithelial cells of the skin of a nipple affected with chronic eczema leading to duct cancer of the breast, he gives an account of two cases. In these he found the bodies in the epithelial cells in great numbers in the crusts on the surface, as well as in the deeper layers of the epidermis. Microscopic examination of the crusts would thus be of considerable diagnostic value in doubtful cases of simple eczema and Paget's disease, although it must be remembered that similar bodies may be found in the epithelial cells of epitheliomata; but in the latter they are fewer, and usually exist only in the central part of the cell nests. He also suggests that, as the exact nature of these bodies is as yet but incompletely understood, they should be called "endocytes," a term which may serve the purpose of location only, and holds out promises of a paper on their more exact nature at no distant date.

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(214) The Pathology of the Sympathetic.

DR. HALE WHITE (*Guy's Hospital Reports*, vol. xlvi) shows that in adult man the superior cervical and semilunar ganglia are degenerate organs, such as the pituitary body, and their functional value increases the lower one descends the animal scale. The lateral ganglia, on the other hand, do not degenerate with advanced age. The cervical sympathetic cord and the splanchnics in man and animals exhibit no sign of degeneration, and are similar in structure, and probably in function. In extrinsic destructive or paralysing lesions of the cervical sympathetic nerve, with myosis and dilatation of the vessels of the head and neck on the affected side, the retinal and conjunctival vessels remain unaffected, contrary to the rule in lower animals. The lumen of the cerebral vessels has not been proved to be enlarged. Rise of temperature on the same side is very constant, as in animals. Contraction of the corresponding pupil is constant in man and animals; the contracted pupil still reacts with atropine, eserine, light, and accommodation. Retraction of the eyeball is an occasional sign in man and lower animals, possibly due to paralysis of the orbitalis muscle of Müller in the latter. Proptosis oculi has been found associated with mydriasis from irritative lesion. Narrowing of the palpebral fissure often ensues in man and animals, probably owing to paralysis of the smooth muscle of the lids, volitional movements being intact. In a case of rapidly growing aortic aneurysm, the nerve symptoms appeared in this order: myosis, lessening of palpebral fissure, redness of ear, slight internal strabismus. Regarding the maladies attributed to intrinsic disease of the cervical sympathetic trunk, there is no satisfactory evidence that migraine is due thereto. Such disease cannot *per se* produce the hemiopia, visual hallucinations, paræsthesiæ in limbs, etc., aphasia, loss of memory, nausea, headache, all of which may occur in migraine. The hypothesis that angina pectoris is due to disease of the cervical sympathetic is untenable. One case of hemiatrophy of the face recorded by Brunner seemed to associate the atrophy with a permanent irritative lesion of the nerve, although there was no history of injury or implicating growth. Hypertrophy of the corresponding side of the face has never been recorded after destruction of the nerve in man, though it has resulted in animals. Exophthalmic goître cannot be explained by functional or organic derangements of the sympathetic nerves. Even if the disease were so low down as to involve the cardiac accelerator nerves, if the lesions were irritative, tachycardia would be associated with contraction of the vessels of the head and neck instead of the dilatation which is always present in exophthalmic goître. As to other sympathetic nerves, many authors have considered that the lesion in Raynaud's disease is to be sought in the vasomotor fibres of the peripheral nerves; but peripheral neuritis fails to explain the paroxysmal commencement of Raynaud's disease and its association with hæmoglobinuria. Neuritis of the splanchnics was

found in a case of diabetes, apparently showing that in man, as in animals, splanchnic disease can cause glycosuria. The sympathetic ganglia, when affected by external lesions, do not reveal any functions that they may have. Diabetes, Addison's disease, exophthalmic goitre, and other affections have been attributed to intrinsic lesions of these ganglia on insufficient grounds. In diabetes no observer has published any changes, save those which Dr. White has shown to be common in all the larger sympathetic ganglia, quite irrespective of the cause of death. The changes in the adrenals usually considered characteristic of Addison's disease may be found far advanced without any symptom of Addison's disease having been present. In this connection the epiblastic origin of the medullary portion must be kept in mind. There is no trustworthy evidence that the semilunar ganglia are specifically affected in this disease; a case in which cancer was seen to have invaded these ganglia had presented no sign of Addison's disease. Pigmentation of the cells of the semilunar ganglia is valueless as evidence of these ganglia being implicated in the gastric crises of tabes dorsalis. The final deduction is that human pathology accords with the teaching of comparative anatomy, physiology, and embryology, that in man the sympathetic fibres have the same function as in lower animals, but the larger sympathetic ganglia are functionless in the adult human being.

LARYNGOLOGY.

(215) Intubation in Diphtheria.

Professor Ramon de la Sota y Llastra, of Seville, gives, in a paper entitled "My Last Six Intubations" (*El Siglo Medico*, October 12th, 1890), his recent experience of intubation of the larynx. He states that he practised the operation for the first time about three years ago, and his experience affords "conclusive proof that intubation of the larynx in croup has great advantages over tracheotomy." The first case was that of a boy aged 27 months, in whom all the symptoms of laryngeal diphtheria had been present for forty-eight hours. When seen the little patient was comatose, and scarcely breathing. Tube No. 2 was inserted without difficulty, and respiration became free, but there was no cough or other sign of rallying, and Dr. de la Sota gave him up. The boy was soon, however, able to take a little sherry and water and some coffee with milk, after which he coughed up large pieces of false membrane. The tube was coughed out on the fourth day, but there was no need to reintroduce it, and the patient was soon quite well. The second case was that of a boy aged 9 months, in whom the symptoms of croup had existed for twenty-four hours. The child was almost at the last gasp, but, on the introduction of the tube, he began to breathe easily, coughed up much mucus and pieces of membrane, and was able to take food. In a few hours, however, symptoms of asphyxia again came on. The tube was withdrawn and found not to be blocked; it was therefore replaced, and the child died ten hours later. In the third case, that of a girl aged 45 months, the introduction of tube No. 3 gave immediate relief, but she died fifty-two hours afterwards, although there was no obstruction of the tube. In the fourth case—a boy aged 42 months—the insertion of tube No. 3 gave only a trifling amount of relief, and the child died twenty-one hours after the operation. In the fifth case—a boy aged 52 months—the introduction of tube No. 3 was at once followed by cessation of breathing and lividity of face. It was evident that the tube had pushed the false membrane down the trachea. The tube was at once pulled out, this manœuvre setting up violent cough, whereby a complete cast of the trachea about 4 centimètres long was expelled. As the dyspnœa still continued, the tube was again introduced with immediate relief of the suffocative symptoms. In five days the tube was taken out, and the little patient made an excellent recovery. This is the fifth time that this accident—the most dangerous feature of intubation—has occurred to Dr. de la Sota, and in each case with the same fortunate result. The best way of obviating it is to use a tube of smaller size than the patient's larynx could comfortably admit, so that it can be easily coughed out. In the sixth case—a boy aged 3 years—this precaution was taken. Although No. 3 would have passed without difficulty, No. 2 was used. The little patient had a good night, and in the morning coughed up the tube together with a piece of membrane, 5 centimètres long by 2 broad. The tube was replaced, and, in a few hours, again coughed up with a piece of membrane 5 centimètres in length by 3 in width. Again the tube was reinserted and all went well for a couple of days, when, ninety hours after the first intubation, the tube was again expelled, but this time without any membane. Asphyxia seemed imminent, but the reintroduction of the tube again relieved the dyspnœa. During the three following days the posterior wall of the pharynx, the uvula, the pillars of the fauces, the palate, the nostrils, the mucous membrane of the cheeks, and even the lips became covered with false membrane. As the respiration was unembarrassed, the tube was withdrawn, and the boy died quietly, after his long struggle, of general blood poisoning and failure of the heart.

(216) Intubation in Syphilitic Stenosis.

Dr. Lefferts, of New York, in a paper read at the Berlin Congress (*Medical Record*, October 4th) gives a series of cases as practical illustrations of the good that may be done by intubation when practised with the following objects: (1) The immediate relief of dyspnœa in all cases of acute syphilitic stenosis of the larynx by mechanically and temporarily affording an artificial passage for the respiratory current through the intubation tube; (2) facilitating and hastening by either equable and prolonged, progressive or specially directed pressure of the intubation tube, the absorption of acute inflammatory effusion, or the thickening and induration attendant upon chronic syphilitic inflammation of the larynx; (3) forcible dilatation and continuous distension, by means of the intubation tube, of slight and recently organised bandlike cicatrices; (4) progressive dilatation, by means of a series of intubation tubes, of cicatricial strictures of the larynx, subsequently to their incision by some form of cutting laryngeal dilator; (5) divulsion and progressive dilatation; incision and subsequent distension, the former being made through the larynx or from below through the tracheotomy wound; or systematic continuous dilatation by such specially adapted intubation tubes as may be required in cases which vary greatly in the nature, extent, and character of the lesions, in all cases of chronic and extensive cicatricial stenosis of the larynx, with displacement and distortion of laryngeal structures, the result of cicatrisation following gummatous degeneration in tertiary syphilis, and where a tracheotomy tube may or may not be worn. Intubation, Dr. Lefferts holds, is indicated also in abductive immobility of the vocal cords due to syphilitic effusion into the soft parts of the larynx and of the surrounding structures. In such cases, it is thought, well directed pressure of the intubation tubes will exert a favourable influence in promoting absorption

of the effused material. In dyspnœa dependent upon abductor paresis from commencing degenerative processes of syphilitic origin in the abductor muscles themselves, the presence of the intubation tube may, it is thought, by maintaining a small respiratory opening, stimulate normal physiological movement and preserve nutrition by maintaining muscular activity. In the author's opinion tubes made of hard rubber will, in most instances, be found to be most satisfactory.

(217) Pachydermia Laryngis.

DR. EDMUND MEYER (*Deutsche med. Wochenschr.*, No. 42, 1890) records a series of observations on eleven cases of pachydermia laryngis. Making a clear distinction between this condition and that described by Virchow as pachydermia verrucosa, he describes the disease as a complete epidermoidal transformation of the mucous membrane of the part affected. The upper layers of epithelium are thickened, and under them appear papillæ more or less aggregated together. The upper layers of cells are flattened and horny, while those beneath tend to the cylindrical or polygonal form. The parts are more than usually vascular, and in the deepest layers are found hypertrophied lymphatic glands. The disease attacks men about the middle period of life, and especially those of strong constitution, who may have been the subjects of chronic pharyngeal or laryngeal catarrh. The occupation of the patient does not appear to have much influence, nor does syphilis or tubercle play any part in the production of the disease. The laryngoscopic appearance is so characteristic that once seen it is seldom forgotten. The peculiar cup-shaped swelling is generally symmetrical over the processus vocales. The progress of the disease is slow. There is no tendency to degeneration or to malignant infiltration. Dysphagia is the most constant symptom, hoarseness being sometimes absent throughout. In seven of the eleven cases quoted, there was a more or less marked limitation of the movements of abduction. This in some cases was quite out of proportion to the size of the swelling, and was probably independent of any affection of the crico-arytenoid joint, as rapid and complete recovery took place in some instances. Iodide of potassium, together with local treatment of the concurrent catarrh, appears to have been the best line of treatment. Operative procedures are not called for. The paper concludes with the clinical details of the eleven cases.

(218) Habitual Dislocation of the Crico-thyroid Articulation.

PROFESSOR H. BRAUN, of Königsberg (*Berl. klin. Woch.*, October 13th, 1890), describes, from experiences in his own larynx and from observations on two patients, the mechanism, symptoms, signs, and mode of reduction of this dislocation. It is a luxation forwards of the inferior cornu of the thyroid cartilage from the articular facet on the cricoid, and occurs on deep inspiration or on gaping, especially when in a constrained position. It is generally unilateral, sometimes to the right, sometimes to the left, and occurs sometimes frequently for days together, at others at intervals of many weeks. At the moment of production there is sharp pain and a feeling of anxiety, and a small swelling appears at the site of the articulation in question. This swelling at once disappears on slight pressure with the finger or on making a swallowing movement, reposition being effected. No medical treatment is necessary, as the patient can reduce the dislocation himself as above. The luxation is chiefly effected by contraction of the muscles attached to the thyroid especially by the sterno-thyroids and crico-thyroids, the larynx being constrained in its movements by its attachment to the hyoid bone; and there is a predisposition to such dislocation when the joint has a loose capsule.

BACTERIOLOGY.

(219) Hog Cholera.

SELANDER (*Annales de l'Institut Pasteur*, p. 545, No. 9, T. 4, September 25th, 1890) continues his researches, commenced two years ago, on the infectious diseases of pigs, known under the names of hog cholera, swine pest, and infectious pneumo-enteritis. He considers that the above are synonyms for one and the same disease, and he describes the symptoms as those of a kind of hæmorrhagic septicæmia. The organism, which he previously described, remains alive for several months in a 7.5 per cent. of salt solution. It loses its virulence when successive generations are cultivated in gelatine, but after being passed through a series of rabbits it regains its infective power and becomes fatal to those animals. Similarly, when passed through a series of pigeons, it becomes virulent enough to cause their death, though, as is well known, they are much more resistant than rabbits. The earlier cultivations kill pigeons slowly, the later ones rapidly; and they are then fatal when injected into pigs in the subcutaneous tissue, and very fatal when introduced into a vein. When pigs are fed on the organs of rabbits that have died from the disease they usually die, and on *post-mortem* examination there is found marked ulceration of the intestine with swelling of the mesenteric glands. If the organism is subjected to a temperature of 53° C. for 25 minutes, to 54° C. for 15 minutes, to 55° C. for 6 minutes, to 56° C. for 3 minutes, it will no longer grow on gelatine; but that the bacteria still remain alive is evident from the fact that they are still mortal to rabbits. They are killed, however, at a temperature of 54° C. kept up for 40 minutes, and 57° C. is rapidly fatal. Death, Selander considers, is due to poisoning, as when filtered blood from an affected animal is injected into the vein of a healthy but susceptible animal, the animal dies rapidly, with symptoms of paralysis, which occur in a regular and definite order. When an animal recovers, the poison is apparently excreted by the kidney. The poison is not destroyed at 58° C., but it loses its power at 100° C. and retains only part of it at 60° C.; it is not an alkaloid but a toxic albumen which has a cumulative action. In some experiments on protective inoculation, Selander found that if he heated a virulent fluid for one hour at 57° C., it protected against the action of virulent blood cultures of the organism, and, in those cases in which he failed in absolutely protecting the animal, the duration of the course of the disease was often considerably increased. A dose of the actual poison injected into the veins was still lethal, although the bacteria could no longer produce the disease. He never succeeded in rendering either pigeons or pigs refractory. The organism is always more virulent when grown in living animals than as a saprophyte, even when growing on blood serum; but in the saprophytic stage, although not so deadly to animals, it resists a higher temperature than it does in the parasitic phase.

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